



Product: [81553](#)

77Ω Twinax, #24 SCHSCA, TFE, SCHSCA Braid, PFA Jkt

Product Description

Twinax, 77 ohm, 24 AWG stranded (19x36) .024" silver-coated high-strength copper alloy conductor, TFE insulation, silver-coated high strength copper alloy braid shield (93% coverage), PFA jacket, commercial non-QPL product

Technical Specifications

Physical Characteristics (Overall)

Conductor

| AWG | Stranding | Material | Nominal Diameter | No. of Pairs |
|-----|-----------|--|------------------|--------------|
| 24 | 19x36 | SHSCA - Silver Coated High Strength Copper Alloy | 0.024 in | 1 |

Conductor Count: 2

Insulation

| Material | Material Trade Name | Nominal Diameter |
|--------------------------------|---------------------|------------------|
| PTFE - Polytetrafluoroethylene | Teflon® | 0.042 in |

Outer Shield

| Type | Material | Coverage [%] |
|-------|---|--------------|
| Braid | Silvered High Strength Copper Alloy (SHSCA) | 93% |

Outer Jacket

| Material | Nominal Diameter |
|-----------------------|------------------|
| PFA - Perfluoroalkoxy | 0.129 in |

Electrical Characteristics

Conductor DCR

| Nominal Outer Shield DCR | Outer Conductor DCR |
|--------------------------|---------------------|
| 7.3 Ohm/1000ft | 7.3 Ohm/1000ft |

Capacitance

| Max. Capacitance Unbalance | Max. Mutual Capacitance | Nom. Capacitance Conductor to Shield |
|----------------------------|-------------------------|--------------------------------------|
| 5 pF/ft | 24 pF/ft | 24.0 pF/ft |

Inductance

| Nominal Inductance |
|--------------------|
| 0.118 µH/ft |

Impedance

| Nominal Characteristic Impedance |
|----------------------------------|
| 77 Ohm |

High Frequency (Nominal/Typical)

| Frequency [MHz] | Nom. Insertion Loss |
|-----------------|---------------------|
| 1 MHz | 1.2 dB/100ft |
| 10 MHz | 4.0 dB/100ft |

| | |
|----------|---------------|
| 50 MHz | 9.2 dB/100ft |
| 100 MHz | 13.0 dB/100ft |
| 200 MHz | 18.4 dB/100ft |
| 400 MHz | 26.1 dB/100ft |
| 700 MHz | 34.6 dB/100ft |
| 900 MHz | 39.3 dB/100ft |
| 1000 MHz | 41.4 dB/100ft |

Delay

| Max. Delay Skew | Nominal Delay | Nominal Velocity of Propagation (VP) [%] |
|-----------------|---------------|--|
| 70 ns/100m | 1.45 ns/ft | 70% |

High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) |
|-----------------|-----------------------------------|
| 1 MHz | 1.4 dB/100ft |

Voltage

| UL Voltage Rating |
|-------------------|
| 150 V RMS |

Temperature Range

| | |
|------------------------------|-----------------|
| UL Temp Rating: | 200°C |
| Operating Temperature Range: | -55°C To +200°C |

Mechanical Characteristics

| | |
|------------------------------|---------------|
| Bulk Cable Weight: | 15 lbs/1000ft |
| Max. Pull Tension: | 12 lbs |
| Min. Bend Radius/Minor Axis: | 1.5 in |

Standards

| | |
|----------------------|--|
| NEC/(UL) Compliance: | CL2P |
| CPR Euroclass: | Eca |
| Military Compliance: | Commercial, non-QPL product (M17/176-00002, MIL-STD-1553 Data Bus Cable) |

Applicable Environmental and Other Programs

| | |
|--|-------------------------------|
| EU Directive 2000/53/EC (ELV): | No |
| EU Directive 2011/65/EU (RoHS 2): | No |
| EU Directive 2012/19/EU (WEEE): | No |
| EU Directive 2015/863/EU (RoHS 2 amendment): | No |
| EU Directive Compliance: | EU Directive 2003/11/EC (BFR) |
| EU CE Mark: | No |

Suitability

| | |
|------------------------------------|-----|
| Suitability - Burial: | No |
| Suitability - Hazardous Locations: | No |
| Suitability - Indoor: | Yes |

Flammability, LSOH, Toxicity Testing

| | |
|--------------------|---------------|
| UL Flammability: | NFPA 262 |
| IEC Flammability: | IEC 60332-1-2 |
| UL voltage rating: | 150 V RMS |

Plenum/Non-Plenum

| | |
|---------------|-----|
| Plenum (Y/N): | Yes |
|---------------|-----|

Related Part Numbers

Variants

| Item # | Color | Put-Up Type | Length | UPC |
|--------------|-------|-------------|--------|--------------|
| 81553 006500 | Blue | Reel | 500 ft | 612825195559 |

| | | | | |
|---------------|------|------|----------|--------------|
| 81553 0061000 | Blue | Reel | 1,000 ft | 612825195542 |
|---------------|------|------|----------|--------------|

| | |
|-----------|---|
| Footnote: | F - MAY CONTAIN MORE THAN 1 PIECE. MINIMUM LENGTH OF ANY ONE PIECE IS 50'. Z - FINAL PUT-UP MAY VARY (= OR -) 10% FOR SPOOLS OR REELS AND (+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN. |
|-----------|---|

History

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| Update and Revision: | Revision Number: 0.347 Revision Date: 05-05-2023 |
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